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Geological Survey Office,
Department of Mines,
Union of South Africa.

SEISMOLOGICAL BULLETIN.

NOV 1957

The data herewith give the results from a network of seismographs intended particularly for the study of earthquakes occurring in or near South Africa. This bulletin, however, is prepared regularly and will be sent to interested organisations on request.

<u>Stations</u>	<u>Pretoria (Pret)</u>	<u>Grahamstown (Gram)</u>	<u>Pietermaritzburg (Piet)</u>	<u>Kimberley (Kim)</u>
Lat.:	25°45.2'S.	33°18.6'S.	29°37.2'S.	28°45.1'S.
Long.:	28°11.4'E.	26°34.5'E.	30°23.8'E.	24°46.8'E.
Lithologic foundation:	Weathered Shale (Pretoria series).	Dwyka shale.	Soft Ecca shale.	Dolerite boulders embedded in decayed dolerite.
Height:	1350 m.	558 m.	656 m.	1321 m.
Instrument:	Benioff S.P. vertical.	Benioff S.P. vertical with short & long period recorders.	Benioff S.P. vertical.	Benioff S.P. vertical.
Seismo. Officer:	The Director.	The Professor of Physics.	The Professor of Physics.	Rev. Br. T.N. Purcell.
Observer:	Mr. T.E. Dicker.	Mr. A.R. Scanlen.	Mr. W.L. Mouton.	Rev. Br. H.F. McGreevy.
Institution:	Geological Survey Office.	Rhodes University.	Natal University.	Christian Brothers College.

Notes: "Earth tremors" originating in the mining district of the Witwatersrand are recorded several times daily by the Pretoria station, and less frequently by the others. These are not dealt with in this bulletin.

Data are occasionally reported herein by courtesy of the Union Observatory, Johannesburg, which operates a 200 kg. Wiechert Horizontal seismograph. This station is called J, and is at 26° 10.9'S., 28° 04.5'E., height 1806 metres.

All times given are G.M.T.

The supervision of this network and bulletin is at present in the hands of the undersigned, to whom all inquiries should be addressed.

Address:
Geophysical Research Institute,
University of the Witwatersrand,
Johannesburg, S. Africa.

H.O. Cliver

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Seismological Officer.

NOVEMBER, 1957.

Date	Station	Phase	G. M. T. h. m. s.	C/ R	Arc Distance	Remarks.
2	✓ Kim	i	07 39 49			
	✓ Gram	i	53	C		
2	✓ Piet	i	18 49 18	R		
	✓ Gram	i	18			
	✓ Kim	i	26	R		
3	Kim	e	19 53 45			
		i	54 06			
3	Kim	i	22 56 48			
4	Piet	i	02 50 25	C		
	Kim	i	30	R		
5	✓ Kim	iPKP	10 12 26		125°	USCGS H = 09 54 29 h=650 km. 13°S 169°E. New Hebrides region.
5	Pret	e	18 11 21			
5	Pret	e	18 51 02			
5	Kim	iPKP ₂	20 11 12		150°	USCGS H = 19 51 15 51°N 178½°W Andreanof Is
6	Kim	i	20 26 31			
10	Kim	i	04 55 18			
10	Kim	iP	18 14 41		90°	USCGS H = 18 01 37 2°S 116°E Nr. E. Coast of Borneo.
10	✓ Kim	iPKP	19 39 10		110°	USCGS H = 19 20 05 34°N 139½°E Nr. E. Coast of Honshu.
10	Kim	iPKP ₁	22 33 50	C	154°	USCGS H = 22 13 55 60°N 152°W Kenai Pen. Alaska.
13	Pret	e	06 11 06			
		e	16 03			
		e	35 15			
		e	42 04			
		e	46 02			
13	Pret	e	07 32 13			
13	Pret	e	07 51 25			
13	Pret	i	08 20 06			
		i	23 41			
13	Pret	e	08 52 19			
13	Pret	e	13 20 17			
13	Pret	e	15 55 30			
13	✓ Gram	ePKP	17 41 16		110°	USCGS H = 17 22 41 33°S 179°W Mag. 6¼ Kermadec Is. Region.
14	Gram	i	22 50 38			
15	Kim		11 50 02			
15	Pret	e	13 16 14			
15	Pret	e	14 35 11			
15	Pret	e	22 51 24			
16	Pret	ePKP ₁	02 07 48		147°	
	Piet	iPKP ₂	08 40		148°	USCGS H = 01 48 48 51½°N 177°W Andreanof Is
16	Pret		06 16 08			
16	Pret		06 41 41			
*18	✓ Piet	iPKP ₁	10 31 (50)		148°	USCGS H = 10 12 00
	✓ Kim	iPKP ₁	55	R	152°	51½°N 179½°W
	✓ Gram	(e)iPKP ₁	32 01		154°	Andreanof Is.
18	✓ Kim	i	15 13 54			
19	✓ Kim	e	16 32 37			
20	✓ Pret	ePKP ₁	12 59 27		150°	USCGS H = 12 40 23
	✓ Piet	iPKP ₁	13 00 (22)		154°	54°N 165°W
	✓ Kim	iPKP ₁	22		155°	Unimak Is.
	✓ Gram	iPKP ₂	59		158°	Mag. 6½.
21	Pret	e	22 54 21			
21	Pret	e	23 01 18			
22	Kim	i	11 08 03			
22	Pret	e	13 13 07			
22	Pret	e	15 18 04			
22	Pret	e	19 39 54			

Date	Station	Phase	G. M. T. h. m. s.	C/ R	Arc Distance	Remarks.
22	Piet	i	23 40 51			
23	✓ -Piet	iPKP ₁	01 18 36		154°	USCGS H = 00 58 33 52½°N 168°W Fox Is.
	• -Gram	iPKP ₁	19 09		155°	
23	Kim	i	20 00 33	C		
24	Pret	e	01 17 46			
24	Piet	iPKP ₁	01 45 29		149°	USCGS H = 01 25 35 51°N 177½°W Andreanof Is.
	Kim	iPKP ₁	33		153°	
24	Kim	i	08 01 29			
24	Kim	i	10 59 49			
25	✓ -Piet	iPKP ₁	04 30 10		151°	USCGS H = 04 11 09 62½°N 151°W Alaska h=150 km.
	• -Kim	iPKP ₁	35	R	150°	
25	Kim	e	11 30 04			
		e	15			
		i	46			
		i	31 54			
25	✓ -Pret	iP	22 47 05		88°	USCGS H = 22 35 00 1½°S 116°E
	• -Gram	iP	59	C	92°	
	✓ -Piet	iP	48 12		89°	Nr. E. coast of Borneo
	✓ -Kim	iP	49 05	R	91°	
26	✓ -Piet	iP	05 22 44		89°	USCGS H = 05 10 00 2°S 116°E
	✓ -Gram	iP	23 00	C	92°	
	✓ -Kim	iP	06	R	91°	Nr. E. coast of Borneo USCGS H = 08 15 27 40°N 23°E Greece foreshock.
26	• -Kim	iP	08 26 25		67°	
26	Kim	i	11 23 38			
26	• -Kim	e	11 47 46			
26	✓ -Pret	iPKP ₁	11 54 47		148°	USCGS H = 11 35 44 51½°N 176°W Andreanof Is.
	✓ -Kim	iPKP ₁	55 27		153°	
	✓ -Piet	iPKP ₁	38		149°	
	✓ -Gram	iPKP ₁	56 06		155°	
26	Pret	i	13 13 29			
26	Pret	i	18 00 18			
26	Kim	(e)i	18 39 22			
26	Kim	i	22 05 59			
		i	06 42			
		i	59			
27	Kim	i	01 51 21			
27	Kim	(e)i	02 32 (35)			
27	Kim	i	02 37 21			
27	✓ -Kim	iP	03 19 05		67°	USCGS H = 03 08 06 39½°N 22½°E Nr. E. Coast of Greece.
27	Kim	i	10 08 47			
27	Kim	iP	14 09 04		82°	USCGS H = 13 56 30 20°S 67½°W S. Bolivia
28	✓ -Kim	iPKP	21 09 14		125°	USCGS H = 20 50 10 15°S 168½°E New Hebrides Is.
29	Kim	i	07 55 35			
29	Gram	iP	17 54 59		72°	USCGS H = 17 43 38 48½°S 124½°E S. Indian Ocean.
	Kim	iP	55 25		76°	
29	✓ -Piet	i	22 31 00			
	✓ -Gram	i	31 36			
	✓ -Kim	i	37			
30	Piet	i	02 06 01			
	Kim	i	23			
30	Kim	i	19 42 22			

A.A. ATTRIDGE

27 JAN 1958

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DECEMBER, 1957

Date	Station	Phase	G. M. T. h. m. s.	C/ R.	Arc Distance	Remarks
3	Kim	iPKP ₁	02 05 21	R	153°	USCGS H = 01 46 05 51½°N 178°W Andreanof Is
	Piet	iPKP ₁	57	R	150°	
3	Piet	e	19 25 39			
		i	32 21			
	Kim	i	28 20	R		
	Gram	e	29 05			
		i	12			
3	Piet	iPKP ₁	23 51 07	C	150°	USCGS H = 23 31 16 51°N 178½°W Andreanof Is
	Kim	iPKP ₁	11	R	152°	
4	-Piet	iP	03 51 21		98°	USCGS H = 03 37 45 45½°N 99½°E Outer Mongolia Mag. 8.
	-Kim	iP	37		102°	
	-Gram	eP	54		104°	
		i	59			
5	Kim	e	02 03 48			
		i	04 53			
	Piet	i	03 56			
	Gram	e	04 43			
		i	06 33			
5	Piet	(e)i	09 50 03			
5	Pret	i	12 51 37			
5	Pret	i	12 58 49			
5	Kim	e	16 15 26			
		i	36			
5	Kim	i	16 20 32			
6	Gram	i	09 49 23	C		
	Kim	i	43			
9	Kim	iPKP	16 08 37	C	† 123°	USCGS H = 15 49 34 New Hebrides Is.
9	✓ Kim	iPKP	22 27 10		142°	USCGS H = 22 07 43 65½°N 133°W. Yukon
10	Kim	i	10 03 39			
10	Kim	i	13 47 31			
10	✓ Kim	iPKP	14 54 52	R	123°	USCGS H = 14 35 57 6°S 154½°E Mag. 6¼ Solomon Is.
10	Kim	e	15 05 03			
10	Piet	i	18 31 21	C		
	Gram	i	18 32 14			
		i	33 08			
13	✓ Piet	iP	01 55 49		67°	USCGS H = 01 44 59 Mag. 7¼, 34½°N, 48°E Iran
	Gram	iPcP	56 18	R	68°	
13	Pret	i	07 27 (36)			
13	Pret	i	09 50 (10)			
13	✓ Pret	iPKP ₂	20 46 (21)		151°	USCGS H = 20 26 22 52½°N 170°W Fox Is.
	Kim	iPKP ₂	33		155°	
14	Kim	(e)i ²	17 15 18			
14	Pret	i	23 55 (11)			
	Piet	e	53			
15	Gram	(e)i	00 59 23			
16	Gram	i	07 06 51	R		
16	✓ Kim	iPKP ₁	17 47 37		150°	USCGS H = 17 27 47 50°N 127°W Vancouver Is
16	Gram	i	19 14 47	R		
	Kim	i	50	C		
	Pret	i	15 17			
16	Kim	i	23 16 20	C		
17	✓ Gram	ePKP	05 29 28		146°	USCGS H = 05 10 11 Mag. 6¼ 43½°N 162°E. Nr. E. coast Kamchatka.
	Kim	(e)iPKP	42		143°	
17	Pret	i	10 28 03			
17	✓ Pret	iPKP	14 08 29		125°	USCGS H = 13 50 05 Mag. 7¼ 12°S 167°E Santa Cruz Is.
	Kim	iPKP	45	C	126°	
	Gram	iPKP	58		122°	
	Piet	iPKP	09 01		121°	
17	Kim	i	16 53 37			

FEB., 1958 (Contd)

Date	Station	Phase	G. M. T. h. m. s.	C/ R	Arc Distance	Remarks
18	Gram	iP	20 53 06		43°	USCGS H = 20 44 58 Sandwich Is.
	Kim	iP	28	C	46°	
	Pret	iP	29		50°	
19	Kim	i	16 05 38	C		
20	Gram	iP	11 30 55	C	80°	USCGS H = 11 18 42 30 $\frac{1}{2}$ °S 71°W Central Chile
	Kim	iPcP	31 01	R	81°	
	Piet	iP	20	R	85°	
23	Kim	iP	12 46 44		91°	USCGS H = 12 34 03 35°N 36 $\frac{1}{2}$ °W. Atlantic Oc.
24	Pret	i	07 10 (27)			
	Piet	i	11 42			
		i	12 06			
	Kim	i	13 08			
24	Kim	iP	15 52 15		± 83°	USCGS H = 15 40 04 Northern Chile.
25	Kim	iP	16 39 15	R	92°	
26	Kim	i	12 27 56	R		USCGS H = 16 26 01 10 $\frac{1}{2}$ °N 62 $\frac{1}{2}$ °W Venezuela
27	Gram	i	07 27 02			
	Kim	i	21	R		
27	Gram	(e)i	09 48 08			
	Kim	i	55	R		
27	Kim	i	21 03 30	R		
28	Kim	i	14 48 57	R		
	Gram	i	58			
28	Kim	eP	15 41 50		+ 80°	USCGS H = 15 29 27 Southern Bolivia
	Gram	eP	51		± 80°	
28	Pret	i	15 49 (00)			
28	Kim	i	19 19 40			
29	Gram	i	00 13 11			
	Piet	i	27	C		
	Kim	i	14 08			
29	Gram	(e)iP	15 24 20	C	+ 80°	USCGS H = 15 12 08 Coquimbo Province, Chile.
	Kim	iP	23	R	± 81°	
29	Gram	eP	19 21 39		78°	USCGS H = 19 09 55 34°S 70 $\frac{1}{2}$ °W Central Chile h = 100 km.
	Kim	iP	44	R	79°	
		i	22 15			
30	Pret	i	14 29 (36)			
31	Kim	i	14 10 51	C		
31	Gram	iP	14 41 34	C	94°	USCGS H = 14 28 15 45°S 165 $\frac{1}{2}$ °E Off Coast of South Island. N. Zealand.
	Kim	iP	55		99°	

A.A. Attridge

7th February, 1958.